

4
FREE BIKES
SEE INSIDE

YAMAHA YZ125E: 11 GRAND GASSER

DIRT BIKE

APRIL 1978 • \$1.00 UK60p

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**RED ROOSTER
HONDA CR250R**

TESTS:

- **HERCULES 250 ISDT**
- **SUZUKI RM80C**
- **YAMAHA SR500**

**CHUCK SUN
ON THE
RISE**



TOMMY CROFT



TRAINING WITH BRAD LACKEY
FIX FLATS WITH LESS FUSS
KYB PRO-LINE SUSPENSION

DIRT BIKE

VOLUME EIGHT NUMBER FOUR
APRIL 1978

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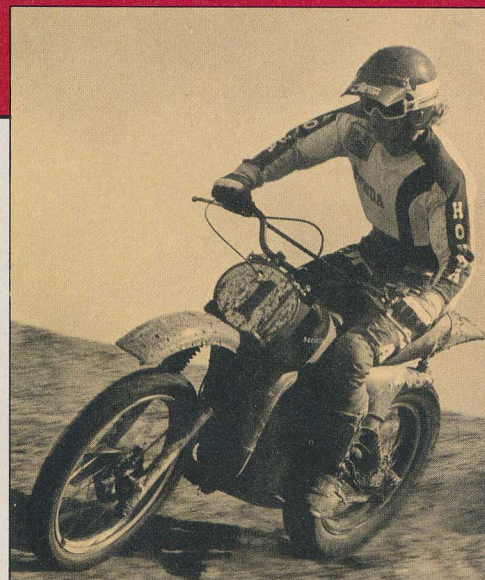
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ON THE COVER:
Tommy Croft and the Big Red Machine
that Cincinnati didn't build.
Photo by Len Weed.

NEXT ISSUE ON SALE APRIL 20

The two-year wait was well worth it

By the Staff of DIRT BIKE

□ Since the day we rode one of Pomeroy's new GP bikes at Saddleback we have been waiting, and dreaming . . . We figured that their new production model just had to be close to this GP version or they may as well hang it up.

Honda fans all over the world have been watching these rascally red rockets win holeshots, motos, and events while they were offered a production racer that was Stone Age in comparison.

The CR250R is indeed the bike we have been waiting for. And just as incredible is its list price of a mere \$1498.

From the tip of its nearly 12-inch-travel Showa forks to its 11-inch rear end, this new Honda is as close as you would want to come to owning the factory fire engines. Many of the components are directly interchangeable between the RC and the R. But the real proof of its GP heritage lies in its performance. Any serious quarter-liter racer who has the opportunity to ride one will no doubt ponder the prospect of owning one.

Stripping her down for a closer look

The Showa forks set a new standard in performance. Their unique design features an actual shock absorber housed within the inner fork tube. It is attached at the bottom of the slider with the usual hex-headed cap screw. The upper shaft of the shock threads into the fork cap and is secured with a lock nut. Two springs in each leg, one just over 40mm and the other over 500mm, keep the front end up without the aid of air pressure. Oil capacity is 275cc.

Showa makes the hefty-sized shock absorbers in the rear as well. Three preload settings are available by relocating a circlip at the top of the shock. The spring rate and dampening on both strokes is on the heavy side. Both lighter and heavier springs will be

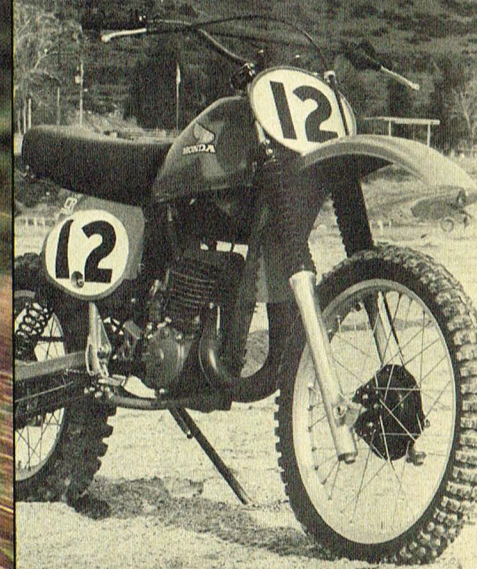
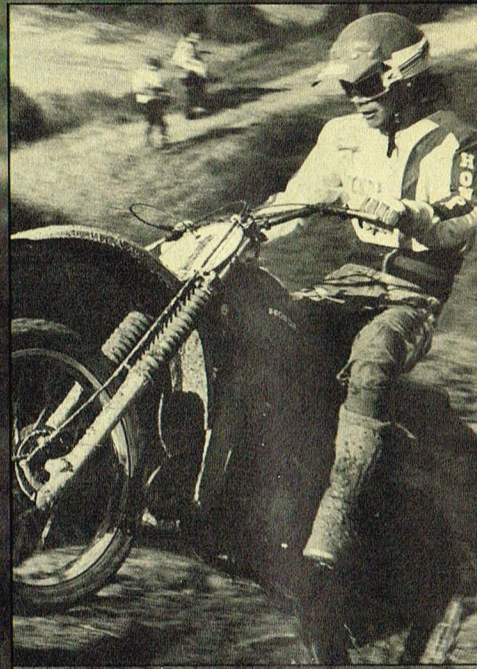
available from your dealer by the time you read this.

Like the factory machinery, the swingarm is made of chrome moly steel tubing. Rectangular tubing and pressed steel box sections are combined in its construction for light weight and high rigidity. It pivots just 80mm from the countershaft on a pair of well-sealed needle bearings.

The chrome moly chassis wraps snugly around the R's red engine and offers five engine mounting points. Tapered roller bearings are used in the steering head for maximum durability. The sidestand mount is affixed high and to the rear where it won't disturb the earth's surface when the suspension compresses.

A pair of aluminum alloy conical hubs with magnesium backing plates house a magnificent set of binders. The rear is full floating to allow maximum suspension benefits while braking. Its actuating arm is located in a well-protected area ahead of the axle and behind the swingarm. A wire loop welded to the chassis keeps your boot from hanging up on the actuating rod. The forged aluminum brake pedal has no position adjustments, but there were no complaints. Extra-beefy shouldered spokes are used in the rear. Rims are by D.I.D.

The R's engine is hot enough to glow red even without the paint. It is a work of art featuring unique internal design. The aluminum alloy cylinder casting uses a layer of hard chrome on its inner bore rather than the conventional steel sleeve arrangement. This allows greater heat dissipation and requires a smaller finning area. This is the same lightweight and efficient design that is used in the works racers and has proven to be quite durable. However, if a piston or ring failure does damage to the cylinder it must be replaced. No oversized pistons will be available. A new cylinder will run you \$178.



Why is it still an Elsinore? Why not a Barstow to Vegas?



HONDA CR250R

HONDA CR250R

The porting design features two auxiliary scavenging ports that allow an efficiency increase through both directional movements of the piston. Because of these ports, a full skirted piston can be used for added durability. The system allows the crankcases to begin filling the moment the piston begins to rise because of the low pressure situation. It also allows the burnt gases to exit more rapidly as the piston starts its downward stroke. A conventionally positioned six-petal reed is used, fed by a 36mm Keihin.

Ignition timing is easily adjusted externally by simply loosening three 6mm bolts and rotating the mag cover.

The aluminum alloy engine cases are very compact and cling closely to the internals. Magnesium is used for the mag and primary drive cover. The clutch actuating arm is located high and in the center of the cases, well out of harm's way.

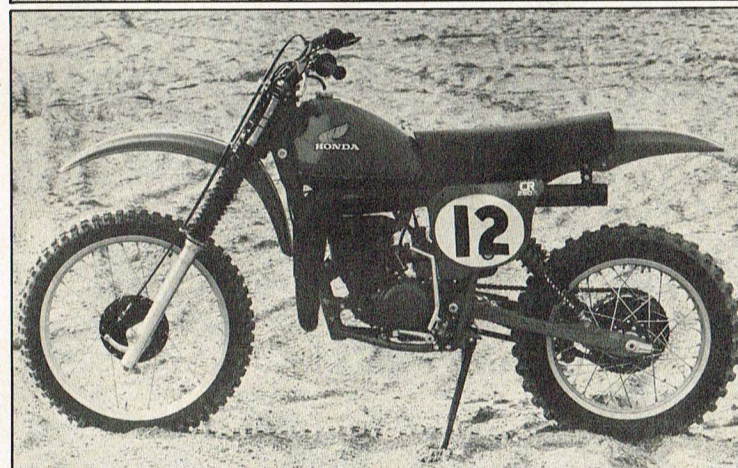
Most of the engine and chassis bolts are dished or hollowed out to save weight. The kickstarter, shift lever and brake pedal are all made of forged aluminum.

A dual-layered foam filter is housed deep within the R's still air box. Two breathers snorkeling up to seat level help make sure that only air is drawn into the bowels of the Red Rooster.

Servicing the filter is a chore. First you must remove the side number plate (one 6mm bolt and a rubber band), then the plastic cover. Next the air boot must be loosened from the carb and the three



Tommy Croft roosts on our test bike.



The Red Rooster awaits. Our 250R carried with it a fascination much like that of an airship. Both in town and at the track, moto maniacs were drawn to it like iron to a magnet.

6mm bolts that secure the filter cage must be removed. Then the assembly can be withdrawn and the filter removed after loosening another clamp. It works well, but . . .

Getting acquainted

Everyone felt right at home aboard the R in spite of its large dimensions. All of the essential controls fall readily to hand (or foot), and the riding position is very comfortable. This elevated position gives you a feeling of confidence while riding the bike and a feeling of superiority when sitting on the line. The footrests are close enough together to give you a comfortable stance while standing or sitting and nothing gouges or gets in the way.

Out hauling ass

Honda's new R loves to go fast. The faster you go, the better it handles. That's a fact. And its handling at medium to slower speeds is excellent. So what does that tell you?

The R is in no way a bike for beginners. Rather, it is for experienced riders who can handle and use its power to its full potential and also maintain a thoroughbred of this caliber in a professional manner.

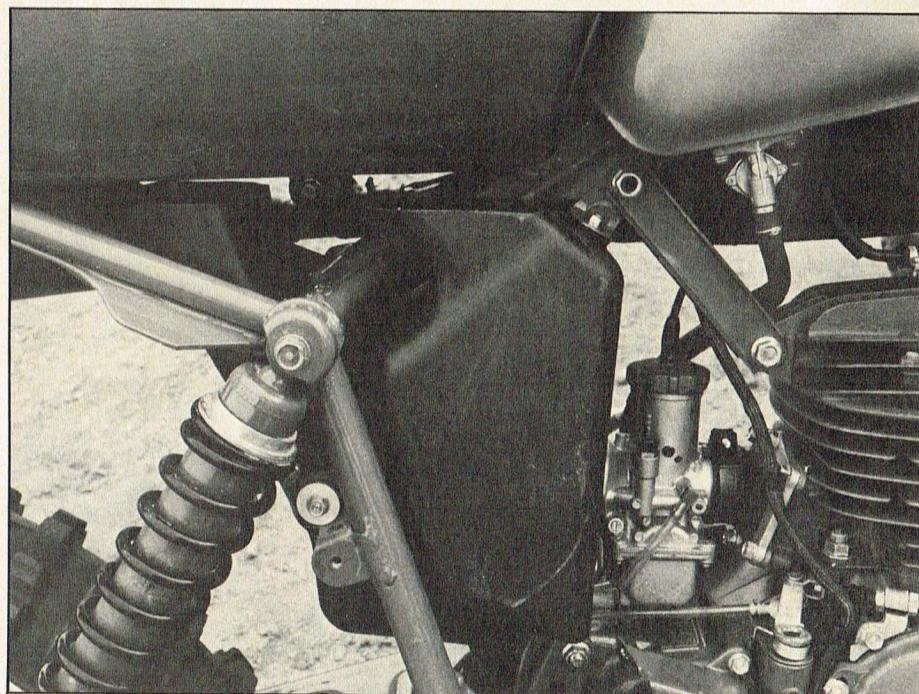
All of our testers commented on the fact that the R can be easily looped. The power comes on very strong but at the same time is smooth while building progressively. A good rider will have no trouble familiarizing himself with its high potency. Lofting the front wheel over whoops and bumps is simply a matter of throttle application. There's not much bottom end, but the mid-range and top end more than make up for it. It's what you need to win starts, and motos.

According to Marty Smith and Tommy Croft, the major difference between the R and their racers is a little less weight and a bit more power throughout the power range, particularly on the bottom. We would assume that this is a product of port trickery performed on this very same cylinder.

There is no other word for the R's basic geometry and handling but excellent. It feels and works better and more predictably than any production bike we have ever ridden. We know we said the same thing last month, but that's the way it goes when the biggies start playing moto one-upmanship.

Brake and power slides are totally predictable. You just know how far the rear end is going to hang out so you can get on with the business of going fast.

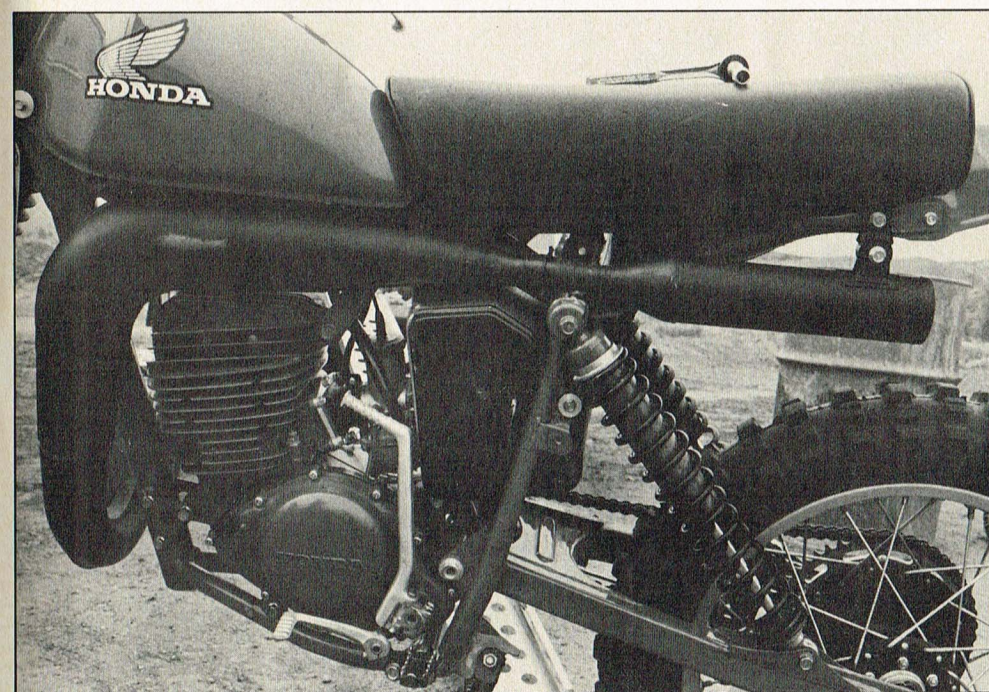
Turns are a perfect display of pinpoint precision. There is a good reason why the engineers at Honda came up with a 28½-degree steering head angle. That's steeper than any other racer we



Air box snakes around the frame with its intakes up high and well protected from flying glop.



Showa magic forks. Take our word for it. They make the bumps disappear. Very works-like down to the plastic cable clamp.



Forged aluminum kickstarter locks in and doesn't flip out when it's not needed. It would be nice to see a spring-loaded shift pad because the lever is so strong and the shaft hollow.

HONDA CR250R

know of, but it works perfectly. Just pick your line and dial it on. Keeping your weight well forward is often necessary to weight the front wheel because of the rocket-like acceleration.

The Showa forks were super-absorbent and well loved by most everyone who rode the R. Their performance was equally impressive on small, medium or large bumps and holes. This is without a doubt the finest original-equipment front end available to date. We didn't even have to change the oil. Our only criticism is that the springs could be a taste stiffer. Still, only one of our testers felt them bottom.

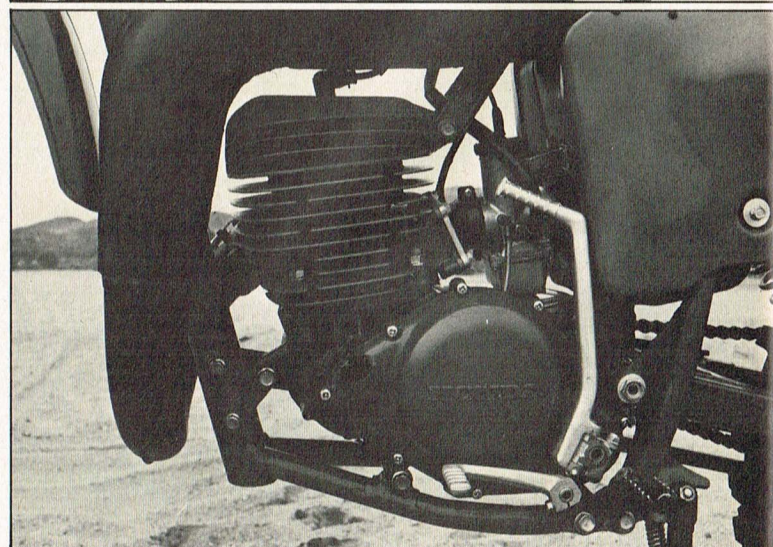
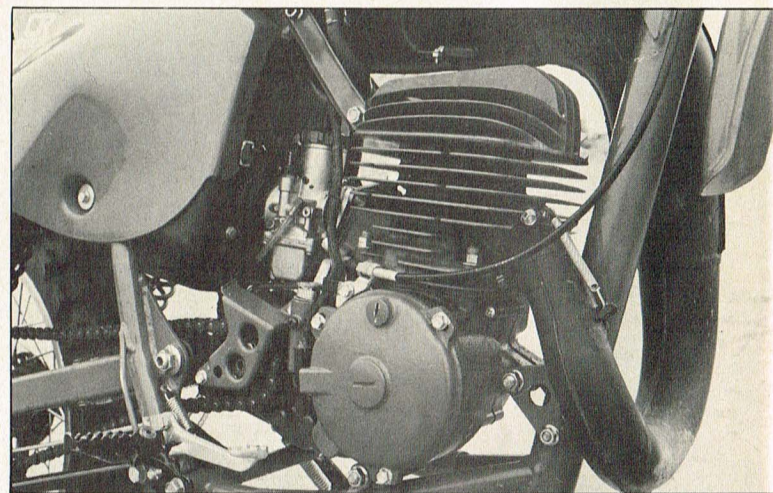
Out back it's another story. After a considerable amount of time on the Showa shocks the dampening was still too stiff on both compression and rebound strokes. The springs were also too stiff. But, as one of our testers was heard to comment, "With a bike as neat as that, you don't need shocks!" Changing springs would have been difficult because of availability, so we



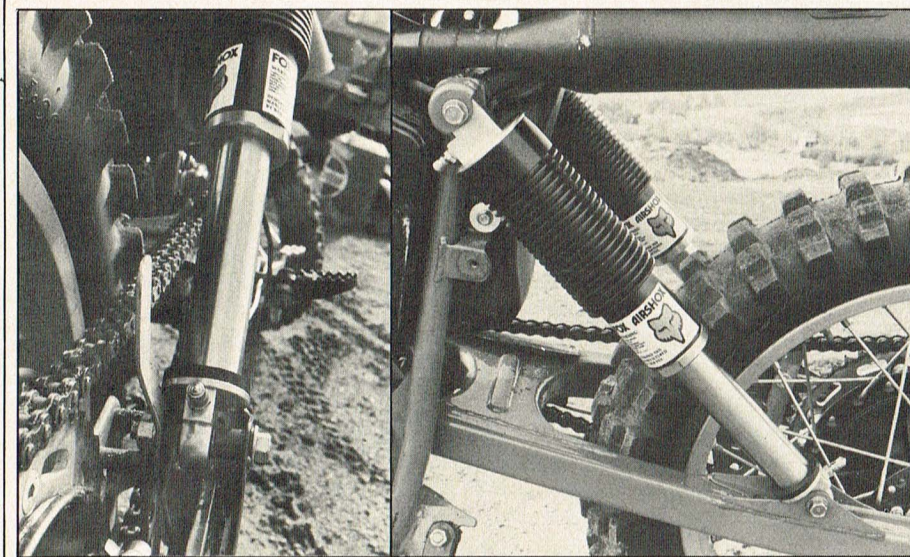
Wegner — sand blasting.



Croft lofter.



Radial head with head stay to dampen vibration, bolt-on footpegs, externally adjustable mag, beauty, simplicity, lots of neat hardware and red paint.



RED AND FOXIE

□ The obvious and logical replacement shock for our R was of course the Fox Airshox. With the exception of some experimentation with Showas, Fox Airshox are used on all of Honda's factory racers as well as by many other factory teams. Fox shocks have become so popular for all-out competition efforts for two good reasons: performance and reliability.

We discussed Bob Fox's suspension system with Tommy Croft and Marty Smith when we went testing with them. They pointed out that even after over two years of experience with the shocks, they still don't have them completely dialed in. That is, the air pressures are so very critical in adjusting them for individual courses and conditions. This is something Brad Lackey had also commented on earlier. On some tracks or some days they work exceptionally well. Other days, you just don't seem to have them set up quite right. But still, they are *the* shock to use, even if they aren't perfectly dialed in, because you *know* that they are reliable. That's all there is to it.

We were informed by Bob Fox that it was necessary to point the filler valve on the left shock down so that it would not touch the exhaust on the factory racers. The same was true on the production R. Aside from that, the only modifications necessary to mount the shocks was to file a small notch on the outside edge of the bottom left mount to clear the shock bottoming flange.

In order to protect the shock shaft from possible chain damage it was necessary to fabricate a guard from a piece of one-inch by 1/8-inch band iron. Its bottom was bent at 90 degrees to allow it to wrap under the arm to prevent it from moving. Use Loctite.

Our initial pressures were 112 pounds for the high pressure (lower valve) and 85 pounds for the low pressure. It is important that you fill the high pressure first or the low pressure will increase when the high pressure is pressing against the low pressure bladder.

It was at this point that we experienced our current ultimate in whoop-de-doo absorption. We have never ridden anything that went so straight, so smoothly and so quickly over the sand waves. On the motocross course we quickly discovered that this setting was too soft for large jumps. At the time, that was all the pressure we had on hand.

Using 125 pounds in the lower valve (high pressure) and 85 pounds in the low pressure proved to be an excellent happy medium for our staff and testers.

With the Fox shocks installed, the R really came to life. The red rocket was at times incredibly in tune with the earth and universe. There is such a great range of adjustability, where two pounds will make a noticeable difference, that you can balance the bike out perfectly. To make these minute adjustments it is important to have the correct equipment. Namely, a Fox pressure gauge (\$27) or its equivalent and an adequate supply of air pressure. That's it. In time, you will be as satisfied as we and the Honda team are.

The 17½-inch Fox shocks sell for \$290 a pair including a very detailed manual. There is a formula and table in the manual that will allow you to get ballpark figures for your bike no matter how your shocks are mounted. Sixteen-inch Fox shocks go for \$260 per pair. There's also a super shock for Yamaha monos.

For complete information re-eyeball our February issue Fox story or contact Moto-X Fox, 520 McGlincy Lane, Campbell, California 95008; (408) 371-1221.

followed in the factory race team's footsteps and bolted on a set of Fox dual-pressure Airshox. (Check out the sidebar for pressures and mounting details.) The difference in performance was astounding. The R really came to life and seriously got with the program. Both Smith and Croft use the standard Showas on their practice bikes. After many hours of break-in time they soften up considerably. Everything else on their practice Rs is also very stock. They like them that way. Production Rs will be used by the Honda team for all stadium events this season.

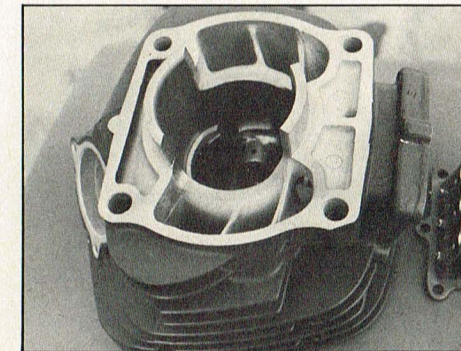
Both brakes performed flawlessly whether hot or cold, wet or dry. Stopping power was progressive and strong.

At 99 kilos (or 218 pounds), the R is very competitive on a scale as well. But more important than actual figures is the machine's responsiveness to minor shifts in rider weight. The R's basic personality says: "Go for it!"

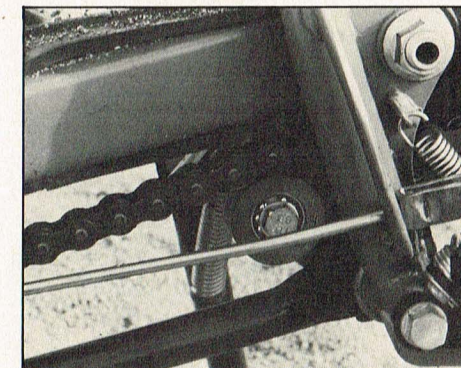
Quick shifts are best made by either using the clutch (which has a very light feel to it) or just backing off on the throttle. Or, in a critical passing situation you can also shift with the throttle full-on for a real thrill.

This and that

The beautiful aluminum alloy fuel tank holds more than enough for 40-minute plus two lap motos and can be easily



The all-aluminum chrome-lined cylinder and six-petal reed block.



Our replacement modified Rowe Products chain roller in place.

HONDA CR250R

filled and checked through its fair-sized filler hole. The petcock is either on or off and is mounted in far enough to prevent contact with your knee or nose. Its lever faces the inside so that you can't accidentally shut it off.

Chrome moly steel is used for the handlebars. Surprise! The grips are soft enough so that you don't have to replace them. All of the cables and controls are top-notch.

Our test unit was numbered 000005 and was fitted with a pre-production painted rear fender. It quickly went south the first day out when George went wild in the sand and broke it with his leg. Regular production units will be fitted with a more durable plastic like the super-wide front unit.

After the first 15 minutes of riding we returned to the pits to find that the forward chain roller had disintegrated. A modified Rowe Products ball bearing roller replaced it and is holding up pretty well. The problem seems to be that the roller has to be quite narrow to clear the torque arm for the rear brake when the suspension compresses. As a result, the chain sort of "rides the edge" of the roller. The rollers on both Smith's and Croft's bikes were well worn and had obviously been there for some time.

Everything else on the R held up well.

All of the components fit well and (with the exception of the air filter) were simple to service and work on.

Round the ragged racetrack the rascally red R ran

Honda's new 250 motocrosser is a serious racing machine. The R stands for replica and that is exactly what it is: an RC replica. This bike has been developed by Team Honda over the past two years in national and international

competition. Now one can be yours. With a suggested list price of just \$1498 they are practically giving them away.

How does it compare with our green ultimate 250 of last month? Although it was close, we all chose the red bike.

So we now have a new world's greatest 250 ever. We think next month we'll match up the Red Rooster with the Green Streak and add the yellow of the Yamaha YZ250E. We'll call it Shootout at the DB Corral. ■

HONDA CR250R

PRICE: (approx. retail, West Coast)
\$1498

ENGINE: Two-stroke single

DISPLACEMENT: 247cc

BORE & STROKE: 70.0mm x 64.4mm

COMPRESSION RATIO: 7.3:1

CARBURETION: 36mm Keihin

HORSEPOWER: 30.1 at 7000 rpm

PRIMARY DRIVE: Straight-cut gear,
3.250:1

TRANSMISSION RATIOS:

1) 1.900

2) 1.591

3) 1.240

4) 1.000

5) 0.839

FINAL DRIVE: D.I.D 520TR, 3.5:1

14-tooth countershaft

49-tooth rear sprocket

AIR FILTRATION: Oiled foam, dual layer

ELECTRICS: CDI

LUBRICATION: Pre-mix, 20:1

RECOMMENDED OIL: Honda 2-Stroke oil

FUEL TANK CAPACITY: 8.5 liters
(2.2 gallons)

FRAME: Chrome moly, semi-double
cradle

SUSPENSION:

Front: Showa forks with 300mm
(11.9 inches) travel

Rear: Showa gas shocks offering
280mm (11.0 inches) axle travel

STARTING: Primary kick

WHEELS & SPOKES

Front: D.I.D with cross-2 and 3 spokes

Rear: D.I.D with cross-2 and 3 spokes

TIRES:

Front: 3.00x21 Dunlop Sports Senior

Rear: 5.00x18 Dunlop Sports K88

DIMENSIONS:

Wheelbase: 146.0 cm (57.5 inches)
+ 3.5 cm

Swingarm length: 51.3 cm (20.2
inches)

Ground clearance: 30.0 cm (11.9
inches)

Bars, height: 119.0 cm (46.9 inches)
width: 89.0 cm (35.0 inches)

Pegs, height: 38.5 cm (15.2 inches)
width: 48.0 cm (19.0 inches)

Seat height: 94.0 cm (37.0 inches)

Fork angle: 29 degrees

Weight: 99 kilos (218 pounds) without
fuel; 43.1 percent on front,
56.8 percent on rear

BRAKES:

Front: Cable-operated, conical

Rear: Rod-operated, conical

PARTS PRICES:

Cylinder: \$178.20

Piston: \$17.40

Rings: \$9.30

Clutch cable: \$6.00

Clutch lever: \$3.40

Brake pedal: \$21.80

Shift lever: \$19.30



Gaping chasms were no concern to Big Red and Marty Moates.

